National Vulnerability Database (NVD)

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Agenda

- National Vulnerability Database (NVD) Overview
- NVD Components
- NVD Analysis Activities
- NVD Data Feeds
- National Checklist Program (NCP)
- Security Content Automation Protocol (SCAP) Resources

NVD Overview

- U.S. government repository of IT vulnerability information
- NVD database currently contains >44,000 vulnerability entries
- Website received over 40 million hits in CY 2009
- NVD data holdings are used extensively by government, industry and academia

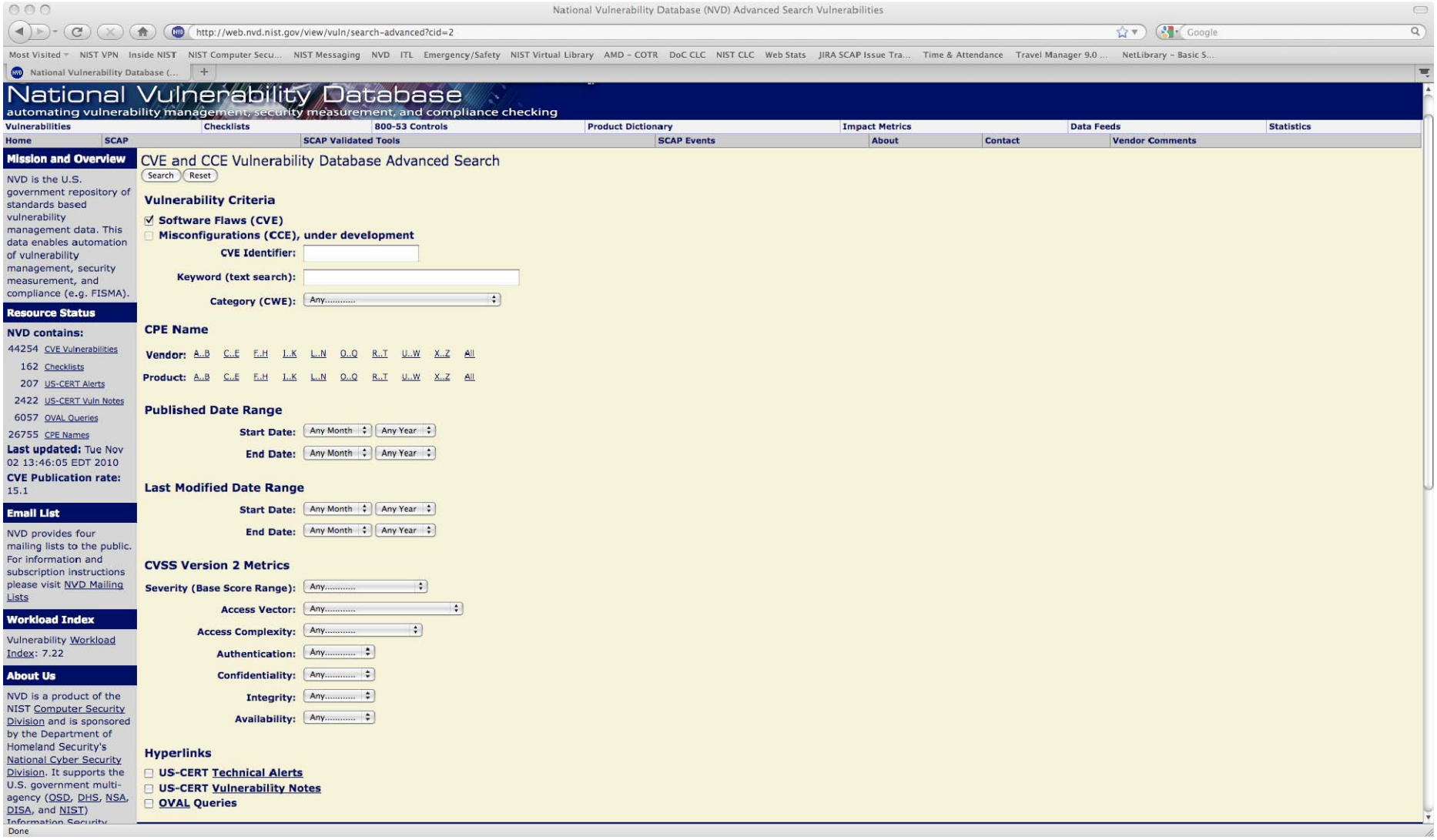
NVD Components

- National Vulnerability Database
  - Security-related software flaws
  - IT product dictionary
- National Checklist Program Website
  - Repository of low level checklists for securing operating systems and applications
- SCAP Validation Program Website
  - List of products that conform to the NIST-published SCAP validation requirements
- SCAP Resources
  - SCAP publications, data repositories and tools

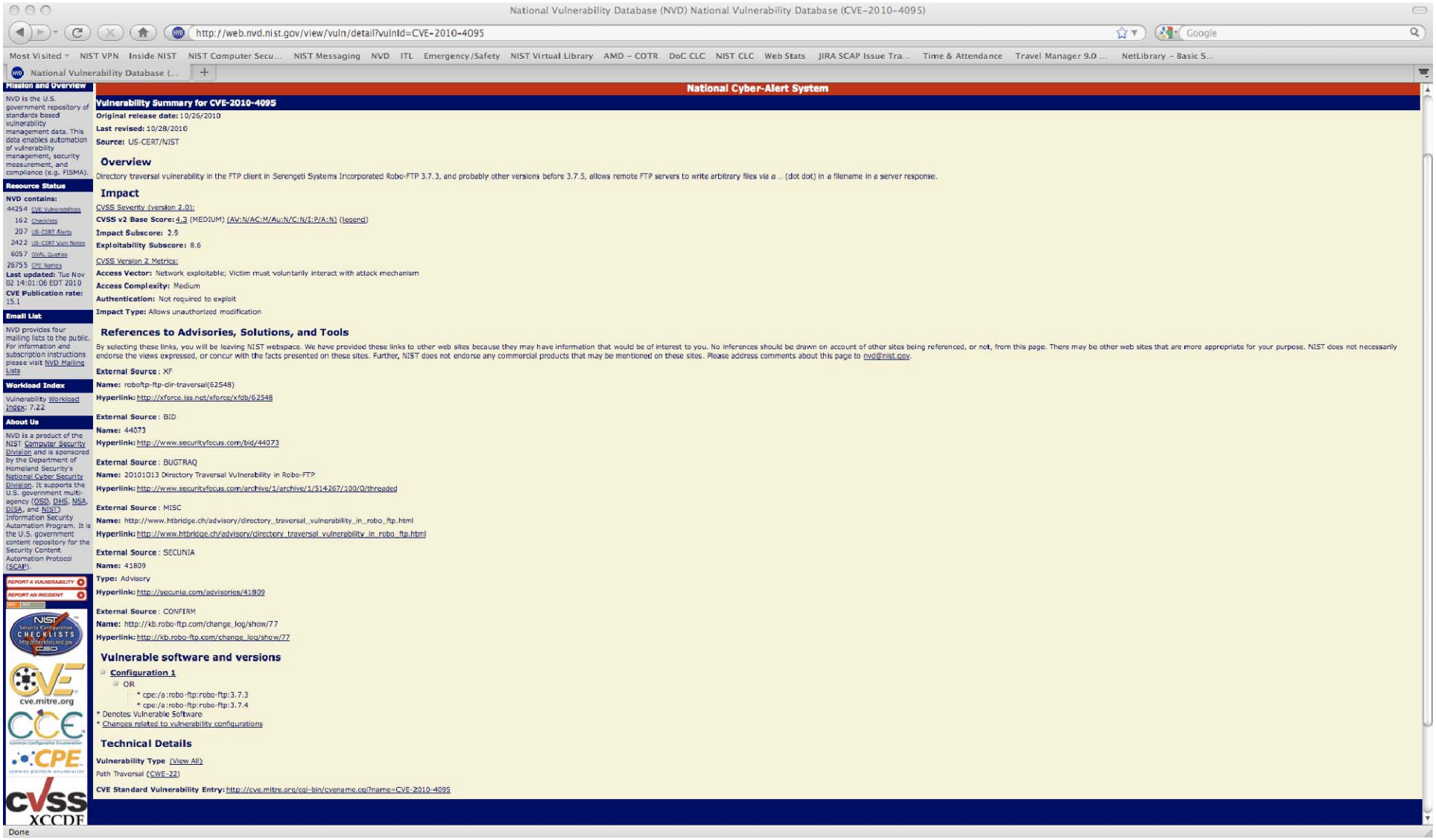
NVD Vulnerability Analysis Activities

- NVD contains over 44,000 Common Vulnerabilities and Exposures (CVE®) entries with the NVD Analysis Team analyzing ~6,000 vulnerabilities a year
  - Compute and publish impact metrics (i.e., Common Vulnerability Scoring System [CVSS] base scores)
  - Express affected platforms (e.g., software & versions) using a uniform naming convention – the Common Platform Enumeration
  - Describe the underlying weakness or root cause (e.g., buffer overflow, input validation error) of the software flaw using the Common Weakness Enumeration
  - Mediate vendor comments and community feedback

NVD Advanced Search Capabilities



NVD Vulnerability Summary



NVD Data Feeds

- Machine-readable vulnerability data feeds
  - >23,000 downloads of the NVD vulnerability data feeds in July 2010
- Product dictionary containing over 26,000 unique product names
  - 992 downloads of the NVD CPE dictionary file in July 2010
- Spanish language vulnerability data feeds (translations performed by INTECO personnel)
- Beta Common Configuration Enumeration (CCE) to 800-53 mappings

National Checklist Program (NCP)

- NCP website contains 162 low-level checklists that are categorized as follows:
  - Tier I – Prose checklists
  - Tier II – Non-SCAP automated content
  - Tier III – Designed to work in an SCAP-validated tool
  - Tier IV – Will work in an SCAP-validated tool
- Checklist submissions come from a variety of organizations – government agencies, software vendors and third parties
- Submission guidelines for the NCP are described in NIST Special Publication 800-70, Rev. 1; National Checklist Program for IT Products-Guidelines for Checklist Users and Developers

SCAP Resources

- SCAP Publications
  - NIST SP 800-117: Guide to Adopting and Using the Security Content Automation Protocol
  - NIST SP 800-126: The Technical Specification for the Security Content Automation Protocol
  - NIST IR 7511: Security Content Automation Protocol (SCAP) Validation Program Test Requirements
- SCAP Content Development Tools
  - Enhanced SCAP Editor (eSCAPe)
  - Recommendation Tracker
  - SCAP Content Validation Tool

SCAP Validation Program Website

- List of products that have been validated by NIST as conforming to the SCAP and its component specifications
- Full description of SCAP product validation information, capabilities and status
- 40 SCAP validated products from 30 product vendors
- 9 National Voluntary Laboratory Accreditation Program (NVLAP) Accredited Independent SCAP Testing Laboratories

NVD Future Capabilities

- Create a CCE analysis and scoring capability based on the Common Configuration Scoring System (CCSS)
- Design, build and implement web services that handle requests for NVD SCAP data products.
- Develop and deploy web services & interactive web portal that will streamline and expedite the NCP checklist submission process and help ensure the completeness of submission packages

Questions?

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National Vulnerability Database

http://nvd.nist.gov